

American Bee Journal

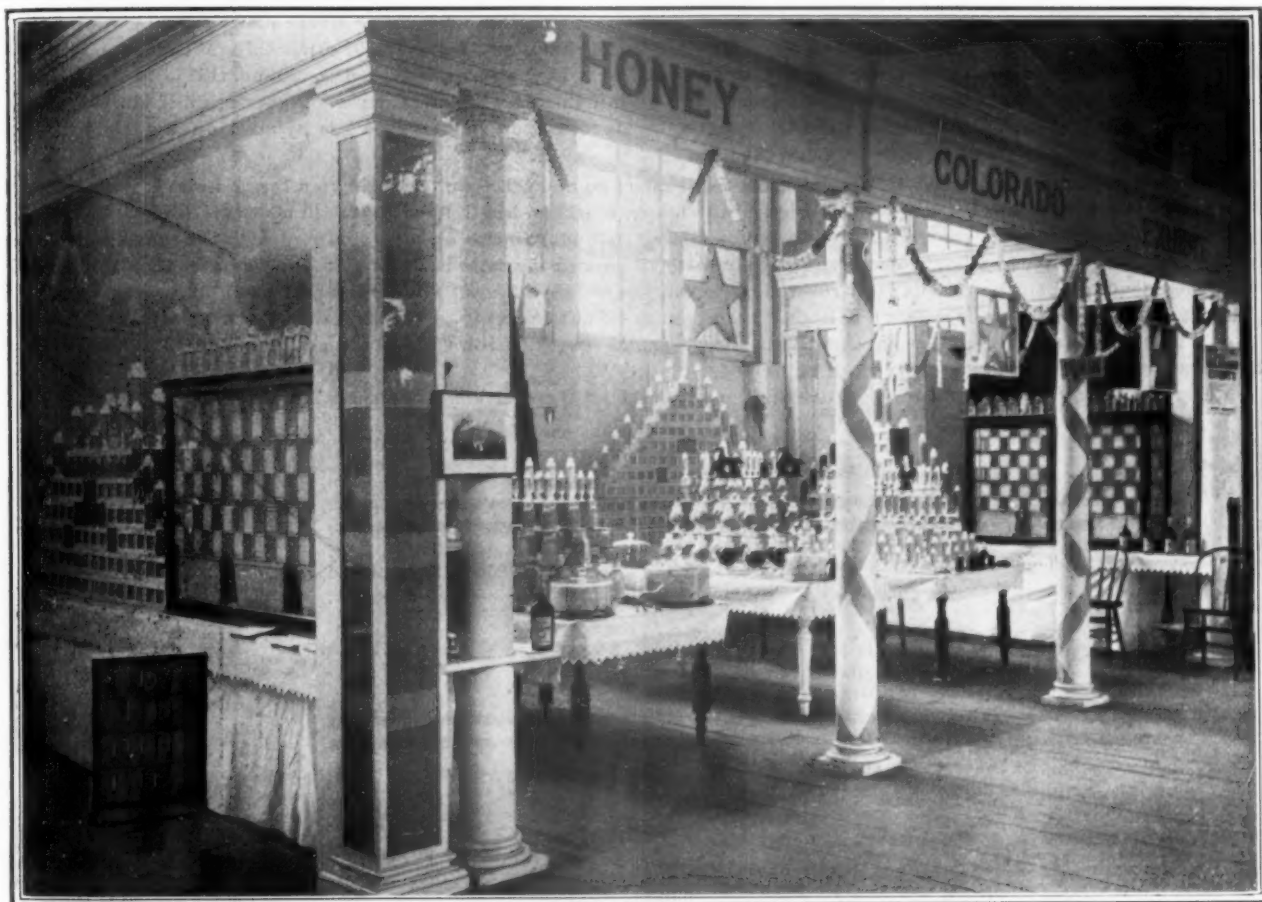


45th Year.

CHICAGO, ILL., FEB. 16, 1905.

No. 7.

The Colorado Apiarian Exhibit at the St. Louis World's Fair,



The Colorado Apiarian Exhibit at the St. Louis World's Fair last year was without doubt the most attractive of its kind there. It was in the excellent hands of Hon. G. W. Swink, of Otero Co., Colo., and we are much pleased to present a good picture of this fine exhibit, as shown above.

The display consisted of comb honey in one-pound sections, and extracted honey in bottles from $\frac{1}{8}$ pound to 10 pounds each.

There was also a large pyramid of beeswax 2 feet in diameter at the base, 4 inches at the top, and 8 feet high, which weighed 700 pounds. There were very fine specimens of solid beeswax in the forms of horses, roosters, lions, fish, World's Fair buildings, besides bricks of beeswax and many other novelties in wax.

Among other things in comb honey was some fine brood-frames solidly filled with the whitest of alfalfa honey, besides 5 large stars of comb honey, and 5 beautiful samples of different designs built in glass, weighing from 20 to 60 pounds each. These were indeed most ingenious, and attracted considerable attention.

This beautiful apiarian display from Colorado won the Grand Prize on honey and beeswax, also 4 gold medals, 7 silver medals, and 5 bronze medals.

Mr. Swink certainly deserves great credit for the interest he took in preparing and installing this large and attractive exhibit. No doubt it will result in calling the attention of the world to what Colorado can do in apiarian products.

Correspondence Course in Bee Culture.

Last fall we announced this course and made a special offer to students for early enrollment. We have secured quite a number of students, but nearly every one of these wants to continue his own bee-keeping so that we find ourselves without a sufficient number to recommend to parties wanting help in their yards.

We have inquiries now for help from a number of States—California, Colorado, Florida, Idaho, Illinois, Pennsylvania, Michigan, and other States. See what one of our students says:

THE A. I. ROOT CO., Medina, Ohio.

LA COSTA, TEXAS, Jan. 28, 1905.

Dear Sirs:—I am very grateful for the 1905 edition of the "A B C of Bee Culture". I am highly pleased with your instructions in your Correspondence Course. It brings out points the amateur could never find by reading bee-books as it gives the essential parts in rotation so to explain them understandingly. It is like having a teacher or trying to study off-hand. Saving so much time and getting the foundation started right is half the battle. I hope to be an expert bee-keeper some day. Should I fail I certainly could not blame you. Everything bearing your name is first-class. May you ever prosper and live long to instruct us. With best wishes, Yours truly, W. R. HESSEK.

Send for our prospectus, or, better still, send us your order with \$10.00, for which we will send you:

**Complete Course of 17 Lessons.
Gleanings in Bee Culture 1 Year.
1 A B C of Bee Culture.**

We give in addition personal answers to as many questions as the student desires to ask, either on bee culture, locations, help, honey markets, or, in fact, any subject relating to bee-keeping. We know where many good locations are yet untouched; where the good honey markets are; who is needing help, and hundreds of other things that the bee-keeper wants to know. We can't tell you these things unless you ask. If you have hesitated to ask us, thinking we could not well afford to give time to answer your questions, enroll in our Correspondence Course. Never mind if you have been a bee-keeper for 20 years. If you do not need the lessons, the information we can give you by mail on a variety of topics will more than pay you. Let us show you one case:

A party became interested in bee-culture a few years ago and set about to build up a large apiary. He succeeded remarkably well, but paid little or no attention to the honey markets, his time being taken up with other matters. The third season he produced a very large crop of honey (150,000 pounds) and being unacquainted with the markets, he sent it for sale to a large city, to a house no more familiar with the honey markets than he. It appears that they sold it at any price they could get, for he told us later that the information we gave him of another market would have saved him over a thousand dollars on the one sale. (He hadn't asked us for it, but learning of the situation we wrote him, but too late; the sale had been made.) Perhaps the American Bee Journal readers think they would not be benefited. We assure you there are dozens of ways in which you can be helped.

Here is what one of our customers thinks of our "A B C of Bee Culture", which is included with the course:

"After looking through the 1905 'A B C of Bee Culture', just received to-day, I told Mrs. C. I would not take \$25.00 for it if I could not get another copy.—P. F. CONKLIN, Elmira, N. Y."

The New Edition (1905) "A B C of Bee Culture" is \$1.20, postpaid, if ordered alone.

And another customer speaks thus of Gleanings in Bee Culture:

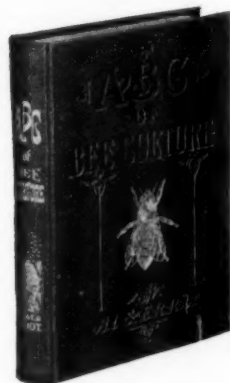
Dear Sir:—You ask if I have found "Gleanings" a good investment, and I can truly say the investment has not only been good, but very good. Although I do not keep bees for profit at this writing, but hope to at some future time, will say that I am trying to learn all I can about the subject, and "Gleanings" adds more ideas to my limited store of knowledge than any other publication I receive. All the departments treated in this semi-monthly paper are very interesting to me, and I get anxious to see its pages when the date arrives for its appearance.

Yours truly,

RALPH P. FISHER.

Don't you think \$10.00 is a small price for what we are offering you?

Gleanings (semi-monthly, 52 pages) is \$1.00 per year if ordered alone.



**THE A. I. ROOT COMPANY,
MEDINA, OHIO.**

AMERICAN BEE JOURNAL

ESTABLISHED IN 1861 THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at \$1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor.

CHICAGO, ILL., FEB. 16, 1905.

Vol. XLV.—No. 7.



Editorial Notes and Comments

A Reminder—Order Bee-Supplies Early.

When we were in the bee-supply business we had two kinds of summer sympathy. One was for the bee-keeper who suffered for the lack of bee-supplies when they were so sadly needed in order to take care of the swarms and the harvest of honey. The other kind of sympathy was for the overworked bee-supply dealer who was almost killing himself in trying to fill orders promptly, and yet at times could not get the goods from the manufacturers fast enough in car-load lots to fill his accumulating orders.

But much of this suffering could be avoided if many more bee-keepers would send in their orders for supplies about two months before they are really needed in the apiary. This should give both dealer and manufacturer ample time to fill such orders, no matter how many of them there might be.

"But", the bee-keeper says, "I don't know just what will be needed two months later." Of course, you don't know exactly, but you can estimate near enough so as to have on hand practically all that will be necessary when the honey season comes. Fortunately, bee-supplies are not perishable like apples and pumpkins, so if an extra supply is on hand they will keep until another season. It sometimes costs the bee-keeper more to be without supplies when they are needed than it does to have a little extra money invested in a surplus stock of supplies.

Closer Touch of National Officers and Members.

Just when and where a certain subject can be most profitably discussed, and just what subjects can most profitably occupy the time of a convention or the space in a bee-paper—these are questions not easily settled in all cases by hasty thought. Evidently something of this was in the mind of one of the officers of the National Bee-Keepers' Association when writing as follows:

"MR. EDITOR:—It has occurred to me that there ought to be closer touch between the members of the National and its officers than at present exists. It is not pleasant to have an occasional hint thrown out that there is some kind of a big four trying to run the Association without regard to the best interests of the members. Such a thing can not be too severely condemned, and if it exists those who know thereof should not stop at hints, but speak out very plainly, giving names and specifications. The officers of the National are not—at least should not be—autocrats; they are servants of the Association, chosen to be its representatives and do its work. So far as I have had an opportunity to judge from being one of them, I believe that at least most of them have no other desire than to have done just what is best for the general interests of the membership, and if there has been any clique that has had a controlling power in influencing action, I have not known of it.

"But however united the Board of Directors may be in desiring to do just what is best for all, they are in one respect badly handicapped. They have never an opportunity for a full meeting in person, and living long distances apart the discussion of any matter by mail must necessarily be tedious, and to some extent unsatisfactory. The point, however, that I have more particularly in mind just now, is that in

their deliberations they ought to have the fullest opportunity for full and free consultation with the membership at large.

"Two ways occur in which this may be done: At the annual convention, and in the columns of the bee-papers. If the latter will permit it, there are distinct advantages in that way. Conference in the convention can occur only once a year; in the columns of the bee-papers from 12 to 52 times. A matter needing immediate early attention may have to wait nearly a year for the convention, and only a week or a month for the paper. Then, the paper reaches a larger number of members than is to be found present at the annual meeting. It costs much less—provided space in the papers is not paid for—no small item. The question is, Will space be accorded?

"Without particularizing others, one subject upon which light is needed—although it may not be referred to the Board, it is one of general interest—is that of incorporation. Will it be good or bad to have the National incorporated?"

There is little doubt that any of the bee-papers will cheerfully give space for the discussion of matters that may come within the province of the National. Indeed, that's what the papers are for, to discuss matters of general interest to bee-keepers. Every bee-keeper should feel at liberty to take the initiative, and to suggest anything that he thinks ought to be acted on by the management of the National. At the same time it should not be forgotten that space is not unlimited, and it must always be left to each bee-paper to decide for itself what is and what is not worthy of publication.

Sawdust for Smoker-Fuel.

This is the way it is used by S. E. Miller, editorial writer in the Progressive Bee-Keeper:

"Grab a handful of green grass and stuff it down on the grate to keep the sawdust from sifting through, fill the fire-cup to within an inch of the top with sawdust, then drop about a teaspoonful of kerosene on top of the sawdust and light it with a match. Let it burn this way and do not close the top for several minutes, or until it has a good start. Then place another handful of grass on top of the sawdust to act as a spark arrester, and close the smoker and it is ready for business. The grass in the bottom keeps the sawdust from sifting down through the grate, and that on top keeps the sparks from flying out. The grass on top will not burn for quite awhile, and when it does, and the smoker begins to throw sparks, put on a fresh supply of grass. As it burns from the top downward instead of the reverse, it will burn a long time before being exhausted."

Incorporation and the National Association.

Entire unanimity of sentiment regarding the advisability of incorporation for the National does not seem to prevail. One member expresses himself on this wise:

"I understand that it will cost only \$10 to incorporate. When an incorporated concern was misrepresented in the Ladies' Home Journal there was a prompt, distinct, and unqualified retraction and apology. When bee-keepers were misrepresented in the same Journal, no surprising degree of agility was displayed in making a retraction, and when it did come it could by no means be said that it was so unqualified as to leave nothing more to be desired. If I understand the thing correctly, the difference was due alone to incorporation in the one case and the lack of it in the other. If the National had been incorporated, would we not have gotten back the full worth of our \$10 in the different treatment we would have received?"

On the other side of the question, "To incorporate or not to incorporate", another member writes thus:

"The only reason for incorporating the National Association is that we might be able to make trouble. Other bodies incorporate to avoid the individual responsibility of the members, but the only reason that I have heard, up to the present time, for our incorporating is that

we might be able to sue somebody. Now, it is my candid opinion that the National Association can find better use for its money than to spend it in lawsuits. The more you have to do with lawsuits the more you will wish you had not had anything to do with law. Here is the point: If we should sue any paper for damages, we would have to prove the damages first. The question would then arise, "Who has been damaged?" And we would have to prove that the National Association, as such, had been damaged. We could not appear in court representing the entire bee-keeping industry, whether we are incorporated or not incorporated. All we could do would be to represent the members of the incorporation, and we would be very apt to find some trouble in proving that the individual members had been damaged a fixed amount."

Cleansing Wax in Salt Water.

In Praktischer Wegweiser it is recommended to boil wax in salt water, watching carefully that it does not boil over. Two or three boilings are said to make the wax clear. The proper quantity of salt is not given.



Miscellaneous News & Items

The Michigan Convention will be held Feb. 23 and 24, at the Eagle Hotel in Grand Rapids. All being well we expect to be present. Since publishing the notices of prizes offered, on page 84, we have been invited to participate, and would say that the American Bee Journal will "give a year's subscription to every man [or woman] who wins any of the other prizes". We hope there will be a good exhibit of honey.

The York Honey Co. is now entirely in the hands of Mr. Henry M. Arnd, who has been the manager of the company since it was formed last spring. We have disposed of all our interest to Mr. Arnd, as per agreement dated Feb. 1, 1905, which also includes, for a specified time, the privilege to use our registered honey-labels, and also the name "York", in the business or firm name. We wish Mr. Arnd the fullest measure of success, as he certainly deserves. Bee-keepers can rely implicitly upon him for an honorable and square deal every time.

Mr. H. S. Ferry, of Westchester Co., N. Y., has sent us a sample of the Ferry hive-opener and also the Ferry bee-brush. Each is attached to a small chain, at the other end of which is a metal eyelet to slip over a button, which insures its presence when once buttoned to the operator. The metal hive-opener is about 4 inches in length, and one end is in the form of a ring. At the other end is a sort of tomahawk, which can be used as a tack-puller, screw-driver and little hammer. The bee-brush is made double, so that bees from both sides of a comb can be swept off with one motion. Both of the articles are ingenious, and doubtless will be offered to bee-keepers through the bee-supply dealers.

The Illinois Bee-Keepers' Bill has been introduced in the State Legislature and referred to the proper committees. The following is a copy of the document:

A BILL.

AN ACT making an appropriation for the Illinois State Bee-Keepers' Association.

WHEREAS, The members of the Illinois State Bee-Keepers' Association have for years given much time and labor without compensation in the endeavor to promote the interests of the bee-keepers of the State; and,

WHEREAS, The importance of the industry to the farmers and fruit-growers of the State warrants the expenditure of a reasonable sum for the holding of annual meetings, the publication of reports and papers containing practical information concerning bee-keeping; therefore to sustain the same and enable this organization to defray the expenses of annual meetings, publishing reports, suppressing foul brood among bees in the State, and promote the industry in Illinois:

SEC. 1.—Be it enacted by the people of the State of Illinois represented in the General Assembly: That there be and is hereby appropriated for the use of the Illinois State Bee-Keepers' Association the sum of \$1200 per annum for the years 1905 and 1906, for the purpose of advancing the growth and developing the interests of the bee-keepers of Illinois; said sum to be expended under the direction of the Illinois State Bee-Keepers' Association, for the purpose of paying the expenses of holding annual meetings, publishing the proceedings of said meetings, suppressing foul brood among bees in Illinois, etc. Provided, however, that no officer or officers of the Illinois State Bee-Keepers'

Association shall be entitled to receive any money compensation whatever for any services rendered for same out of this fund.

SEC. 2.—The Illinois State Bee-Keepers' Association shall appoint at each annual meeting a State inspector of apiaries for one year, or till his successor is elected and qualified, who may, if necessary, appoint his own assistants. Said inspector, or inspectors, shall, when notified of the existence of the disease known as foul brood among apiaries, examine all such as are so reported, and all others in the same locality, and ascertain whether or not such disease exists, and, if satisfied of its existence, shall give the owner or person who has the care of such apiaries full instructions as to the manner of treating them. Within a reasonable time after making such examinations the inspector shall make another examination thereof, and if the condition of any of them is such as in his judgment renders it necessary, he may burn all the colonies of bees and all the comb necessary to prevent the spread of the disease. Such inspector shall, before burning, give the notice provided for in and otherwise proceed pursuant to the provisions of Sec. 3 of this Act. The inspector shall make, at the close of each calendar year, a report to the Governor and also to the Illinois State Bee-Keepers' Association, stating the number of apiaries visited, the number of those diseased and treated, the number of colonies of bees destroyed, and of the expenses incurred in the performance of his duty. Said inspector shall receive \$4.00 for each day actually and necessarily spent in the performance of his duties, and be reimbursed the money expended by him in defraying his expenses, provided that the total expenditures for such purpose shall not exceed \$700 per year.

SALE OF DISEASED APIARY, ETC.

SEC. 3.—Any owner of a diseased apiary, of honey made by or taken from such an apiary, or appliance taken from such an apiary, who shall sell, barter, or give away any such apiary, honey or appliance, or bees from such an apiary, expose other bees to the danger of contracting such disease, or refuse to allow the inspector of apiaries to inspect such apiary, honey or appliances, shall be fined not less than \$50, nor more than \$100, or be imprisoned in the county jail not less than one month nor more than two months.

SEC. 4.—That on the order of the President, countersigned by the Secretary of the Illinois State Bee-Keepers' Association, and approved by the Governor, the Auditor of Public Accounts shall draw his warrant on the Treasurer of the State of Illinois in favor of the Treasurer of the Illinois State Bee-Keepers' Association for the sum herein appropriated.

SEC. 5.—It shall be the duty of the Treasurer of the Illinois State Bee-Keepers' Association to pay out of said appropriation, on itemized and receipted vouchers, such sums as may be authorized by vote of said organization on the order of the President, countersigned by the Secretary, and make annual report to the Governor of all such expenditures, as provided by law.

Every bee-keeper in Illinois is requested to write his senator and representatives now in Springfield, urging them to support the above Bill. It should be passed promptly on account of its great need by the bee-keepers of this State, and also by reason of its modest and excellent requirements.

The two committees are made up as follows:

SENATE APPROPRIATION COMMITTEE:—Gardner, chairman; Hughes, McKenzie, Townsend, Pemberton, Mueller, Juul, Barr, Hamilton, Lundberg, Evans, Hall, Curtis, Templeton, Campbell, Hull, Powers, Burton and Cunningham.

HOUSE APPROPRIATION COMMITTEE:—Trautman, chairman; Shanahan, Pendarvis, Kerriek, Lindly, Taggart, Dudgeon, Monroe, Rodman, Drew, Miller (of Clark), Glade, McGuire, Smejkal, Hardin, Arnold, Gaunt, Oglesby, Kittleman, Keck, Russell (of Iroquois), Pogue, Coyle, Heini, Pedersen, Zaabel, Echols, Rose, Donahue, Loy, Grace, Harris, Coleman, Cooke, Rapp, Finnan, Hearn, Witt, Lurton, Schafer, Wilson and Craig.

Rootville's Latest Rootlet.—Last week Tuesday we received the following announcement of the arrival of another boy in the family of the editor of Gleanings:

FRIEND YORK:—An 8-pound boy came to our house last Sunday morning. Both mother and boy are doing finely. He seems to be a very healthy and strong child; hardly ever cries, and sleeps and eats just as any good, strong boy ought to. Sunday morning after, I tried to put on two different collars, and they were both too small; and, finally, when I did get one on it was a tight pinch. I have heard of swelled heads, but never heard very much about swelled necks. I suppose I've got 'em both. E. R. Root.

P. S.—LATER.—Just bought a new hat. Had to.

So Editor Root's head swelled so that it extended down into his neck. Sort of "got it in the neck", too. Well, well, it does beat all how certain happenings affect certain people. Suppose Grandpa Root is also putting on "A. I. R.s" just now.

Congratulations to all of 'em.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook; 44 pages; price, postpaid, 30 cents. This is by the same author as "The Bee-Keepers' Guide," and is most valuable to all who are interested in the product of our sugar-maples. No one who makes maple sugar or syrup should be without it. Order from the office of the American Bee Journal.



Contributed Special Articles

An Experiment with Alfalfa in Illinois.

BY J. E. JOHNSON.

ONE year ago last spring (April 28) I plowed about one acre of ground, then harrowed it twice, after which I sowed 10 pounds of alfalfa seed and 100 pounds of infected soil from the Illinois Experiment Station; that is, soil taken from one of their successfully inoculated alfalfa fields. I again harrowed this little field twice. The weather was fairly favorable, and in two weeks the alfalfa was up, and made a good stand.

The first year I clipped it twice, and let it lay on the ground. Tubercles did not begin to form on the roots until about August or September, and the alfalfa did not look very thrifty. In one corner of this patch the white clover came up pretty thick, and at least half of the alfalfa plants in this corner died out entirely, and very few tubercles formed on these remaining plants.

In 1904 the alfalfa continued to improve except in the corner where the white clover was, and as it began to bloom I visited it frequently. One fine morning in the latter part of June I found that the bees were coming in great numbers from that direction, and the steady, though strong, low hum indicated that a great honey-flow was on. The bees would alight on the ground and alighting-board in front of the hive and rest. Everything seemed to indicate that one of the greatest honey-flows I had seen was at hand; and as there was a steady stream of bees from that field of alfalfa, I at once went to investigate.

Sure enough, there were the bees, but all were coming from or going to the basswood timber down by the creek about half a mile away. A close examination proved that not one honey-bee could be found on that alfalfa. But there were thousands of bumble-bees very busy on it. In fact, I never knew before that there were so many little bumble-bees in this neck of the woods. They all seemed to be about half the size of the old-fashioned Mr. Bumble, with whom I was so well acquainted in my childhood days. Why these bees preferred alfalfa to such a flow from basswood I am not able to say.

Well, in a few days I cut the alfalfa for hay, and it made fine hay; even the hogs would clean up a whole forkful of the dry hay, and both horses and cows like it.

In about four weeks it was in bloom again, and I could find honey-bees working on it every day, but there did not seem to be any great yield of honey; but it yielded some, I suppose, and when it was in bloom again in late fall the bees would work on smartweed until about 10 o'clock, then they would turn their attention to the alfalfa.

The alfalfa has seemed to improve gradually in thriftiness, and its roots are now 3 or 4 feet long in some places, and it has a fair supply of tubercles, but not as many yet as it should have; but in this corner where the white clover got started, there the alfalfa plants have very few tubercles, and some none at all, and the alfalfa looks spindling.

I have observed and studied the actions of this little field of alfalfa very closely, and I feel confident that there is an antagonism between the bacteria of alfalfa and those belonging to white clover. Not that there is a declaration of war between them, but that the presence of great numbers of white clover bacteria has an unfavorable effect on the action of the alfalfa bacteria, I am pretty positive.

It is a well-known fact among bacteriologists that the product of one species of bacteria is often unfavorable to another, and prevents its rapid propagation. For instance, persons having a certain contagious disease are found to be immune from certain other contagious diseases, and can not contract them, even though thoroughly exposed. There is a little white clover here and there all through this field, and in order to smother it out I let the alfalfa stand, and did not cut it the third time. It produced some seed.

I neglected to say that I gave this land a light dressing of manure before I sowed the alfalfa. I also applied lime to a part of it, which gave it a little aid, I think. And to part I applied wood ashes, and that little spot on which I applied ashes far outstripped the other, and a much greater abundance of tubercles can be found on the roots in that

spot. For lack of ashes I applied ashes only to a spot about 10 feet square. Possibly the soil lacks potash.

I think perseverance will bring about a good growth of alfalfa, as well as a fair yield of nectar. I expect to sow several acres of alfalfa next spring. My neighbors are becoming greatly interested in this experiment, and several have asked for infected soil. I had several visitors who came purposely to see this alfalfa.

From the way this alfalfa grew last year on the best part of the patch, I feel safe in saying that when it has become well established it will yield twice as much hay as common clover, and that it will, with its long roots, not only stand the dry weather better, and not freeze out, but it will bring both potash and phosphorus from a greater depth than any other leguminous plant, thereby adding not only nitrogen but potash and phosphorus as well.

My catnip experiment is as yet only a moderate success, but does well among any decayed rubbish without any shade. I will perhaps tell more about it some future time.

However, I got about 100 pounds of extracted honey that smelled very strong of catnip when I was extracting it. This honey has a flavor very much like hoarhound candy, and we all like it so well that we kept it for our own use. It is a little darker than clover. I suppose it is about half smartweed. I will send a pint jar free to the editor if he will pay express charges.

Knox Co., Ill.

[The sample of honey arrived in due time, but we could neither smell nor taste any catnip about it. Some 25 years ago we had a sample of catnip honey that was the real thing, and, compared with that, the sample sent to us by Mr. Johnson has scarcely a trace of catnip honey in it, we think. Mr. Johnson's sample is good enough for any one to eat at any time, while the catnip honey we had long ago would be a good remedy for a certain kind of childish ache—just below the belt!—EDITOR.]



No. 2.—Bee-Keeping in the Southwest.

BY PROF. LOUIS H. SCHOLL.

[Continued from page 85.]

MANAGING THE BEES BEFORE THE HONEY-FLOW.

IN a previous article were listed the honey-flows as they appear in the different localities, and the readers will therefore have an idea about the time when these flows may be expected, and the length of time the bee-keeper has for bringing his colonies to the best possible condition for them.

WHEN TO BEGIN PREPARATIONS.

With many bee-keepers the idea still prevails that the time to begin preparing the bees for the honey-flow is not until spring, but many years of experience have taught some of us that the right time to begin is in the fall before. If the bees go into winter quarters in good condition, with plenty of stores, they will come out the following spring ready to make preparations for business when the honey-flow comes. Such colonies will build up rapidly, and populous colonies are one of the most important essentials in producing a large crop of honey. Herein lies the way for success in bee-keeping. Weak colonies, in a poor condition, will not do; they will profit their owner little or nothing at all.

MANAGEMENT THE PREVIOUS FALL.

Begin the fall before by having good queens in all your colonies. This is of great importance, for around them centers everything. To have a good queen in a colony means the same as heading a herd of fine-bred animals with one of the best breeders. Of course, all this is well known by the bee-keepers in general, but do they follow such teachings about which they have learned? While some do, it is neglected by entirely too many, and that to their own detriment and loss.

Besides good queens, the condition of the brood-nest should be looked after, that there are no defective or incompletely built out combs; or, as it sometimes happens in some of our Southern apiaries, that there are no pollen-filled combs left in the center of the brood-nest. Sometimes an abundance of pollen is stored in the late summer, and combs are packed solid with it. Such, together with otherwise unsuitable combs, only retard the progress of brood-rearing of the colony in the early spring; and no matter how good the queens may be, they will not be able to do their part unless a brood-nest is provided for them in the

best and most suitable manner for their purpose. For this reason it is important to look after the condition of the brood-nest also.

Provide the colonies with *plenty* of stores—for winter? No, not only, but *for next spring also*. Many a time a colony has had enough to live on during the winter, only to starve during the early spring until the honey-flow arrives. This is a decided loss. It retards the progress of the colonies to such an extent that they are not in shape to do the best possible work when the required time comes.

WINTERING THE COLONIES.

Such a subheading looks strange in an article on Southern bee-keeping; nevertheless there is more truth in it than may be supposed, for we *winter* our bees in the South as well as elsewhere, or at least we should do so. This does not mean bee-cellars or chaff-hives, and the like, but it means that the bees are to be prepared for the winter just as outlined above, with sufficient stores, and every colony in good condition, with plenty of young bees. Very little else is necessary in the South during winter. If they are protected from the north and exposed to a southerly location, it is all the better.

The extracting-supers are left on the hives the entire year, and usually contain some honey as part of the winter stores. Later in the spring they are used for brood-rearing, thus providing additional room for the queen; and large hives prevent swarming. Still later, when this room is not occupied with brood any longer, and more honey is being brought in than is used by the bees, it is stored in these supers, thus preventing the clogging of the brood-nest, which so often happens if only a single-story hive is used. Thus, the extracting-supers have an advantage for three purposes if left on the hives—for containing an extra amount of honey for winter stores; in providing additional room for brood-rearing; and furnishing room for storing early honey.

THE HONEY-FLOWS.

In my own locality, and many others, some honey is coming in more or less during early spring, and brood-rearing goes on rapidly, so that colonies soon become very populous. Brood-rearing is begun *very* early, the queens quite often not ceasing their egg-laying at all, in which case some brood is present during the entire year. Therefore it is possible to have strong colonies very early, and ready in plenty of time for the coming honey-flow. The first flow comes in April, from mesquite, and is the one toward which we are building our colonies during the early spring. They should be so managed that they will be in the best possible condition for this flow—strong in bees of the right age for gathering the nectar. Upon this depends the profit of keeping bees.

SWARMING AND PREVENTION.

With everything favorable, swarming might be expected early from such populous colonies, and such will appear as early as the month of February in some years—sometimes later—and often lasting until June or July. This is what we want to prevent if we have an early flow and expect any surplus. For a later flow it may be best to force them to swarm instead of preventing it, as the two, if built up, might store more surplus than if they were not increased. This would be the better plan perhaps if increase is desired. The swarms might be natural or artificial.

SWARMING CEASES WHEN FLOW BEGINS.

If the colonies can only be kept populous and swarming can be prevented until the honey-flow has begun well and the bees have gone to work in earnest at storing surplus honey, then we shall have conquered so much of the problem. The bees devote their whole time and attention to the storing of honey, and seem to forget all about swarming—a fact which is entirely different from those existing elsewhere, especially in the North where the colonies swarm right in the midst of the honey-flow, leaving the hive with supers of sections only partly completed, much to the vexation of the bee-keeper.

There are two ways of preparing your bees for the surplus honey-flow for the best results, when such comes early in the season. One is by preventing swarming altogether, and the other is done by preventing swarming up to a certain time, but forcing them to the swarming condition just before the flow, and then practice "shook swarming". Of these more will be said later, as space here does not allow me to dwell upon it as fully as I would wish to.

Brazos Co., Tex.

(To be continued.)



Convention Proceedings

ONTARIO BEE-KEEPERS' CONVENTION.

REPORTED BY MORLEY PETTIT.

The Ontario Bee-Keepers' Association held its 25th annual meeting in Toronto, in connection with the Provincial Fruit, Flower and Honey Show, Nov. 15, 16 and 17, 1904.

The secretary read the minutes of the 24th annual meeting, which were approved and signed by the president.

Pres. J. W. Sparling's address was then presented, after which Mr. Morley Pettit read the following paper on

EXTRACTED HONEY.

The main products of our industry are comb honey and extracted honey; and in this country we produce the latter much more extensively than the former. It will be seen, then, that my subject is almost as broad as the business itself. It naturally falls into two main divisions: I. The production of extracted honey. II. The care and sale of extracted honey.

The quantity and quality of honey produced depends upon:

1. Weather. 2. Locality. 3. Bees.

1. Weather is beyond our control; but a careful study of conditions extending over several years enables one to forecast with some degree of accuracy, and plan operations accordingly.

2. Locality must be chosen and studied with equal care. The nature of soil, flora and climate are of the utmost importance. The soil should be moist, though not cold, and flora of the honey-bearing varieties. It is desirable to have honey coming from early spring until late fall with two or three sharp intermissions, when bees may kill drones and lose the desire to swarm.

3. I spoke of weather, locality and bees, meaning by the latter: a. Race or breed of bees. b. Condition of bees.

a. There are three races of bees which play an important part in Canada: Italians, Carniolans, and blacks. Black bees are the most common, and have their good qualities and their champions. They are, however, too excitable to be handled comfortably, and do not defend their hives well from robber-bees and moths. The Carniolans are handy and prolific. They breed up rapidly in spring; but are great swimmers. The Italians are quiet and good workers, defend their homes well, and are not so much inclined to swarm.

b. The condition of bees would include style of hive and management. As we strive for uniformity in the apiary, or set of apiaries, so throughout the Province, country and bee-keeping world, the standard hive should, as far as possible, be adopted. That is the Langstroth hive. For the production of extracted honey I prefer the 12-frame Langstroth hive, with supers of the same size. A good queen will occupy this brood-chamber with brood until the fall flow, when she will slacken her operations enough to allow plenty of winter stores to be crowded in at the sides.

There is nothing about a hive so important as the queen. She is the heart of the colony. From her comes the life-blood, as it were—the young bees to take the place of those which are wearing out and dying. With a good, vigorous queen the brood-chamber is kept full of brood in all stages, from the egg to the young bees emerging from the combs. A populous, energetic colony is assured, ready for any honey-flow that may come. A poor queen allows the circle of brood to become smaller and smaller, and the bees get "lazy" according to the old idea. That is, they dwindle in numbers, lose ambition, and store but little honey. The sooner such a queen is replaced the better.

But the thing most to be dreaded is queenlessness. The bees are working and growing old, while none are hatching to take their place. The combs of the brood-chamber which should be bright and filled with eggs and brood, take on a forsaken appearance, and soon become choked with pollen and honey. I am convinced that if it can possibly be avoided a hive should not be one week without a laying queen at any time. With the present scientific methods of queen-rearing, and the low price at which queens can be obtained, one should always have a few extra queens, of his own rearing or coming by mail, to use in emergencies. The queen-condition of every colony must be carefully watched at all seasons of the year, but particularly in preparing for winter.

The year around management has a direct bearing on the amount of honey produced. During the fall flow every colony is assured a good queen, good worker combs in the brood-chamber, and plenty of stores for winter. In preparing for winter, remember first that in cold weather bees must supply their own heat to keep the hive at a living temperature. They also must breathe like any other animal. Third, their breath is laden with moisture. Fourth, as in any other city of from 30,000 to 50,000 inhabitants, the death-rate is considerable.

The spring management is quite as important as the winter. It is then the breeding-up for a honey-flow is done, and two points particularly must be observed. By all means provide plenty of stores, and conserve the heat of the hive. By the beginning of fruit-bloom most colonies should be ready for a super. At the opening of white clover and alsike in June, the dark honey of the previous fall and present

spring should all be removed as far as practicable from both super and brood-chamber. Then put in wedges to enlarge the entrance, and put on two supers containing 11 full Langstroth combs each, with excluder to keep the queen in her place.

The month of June is spent struggling with the swarming problem. By all means, so far as in you lies, hold your colonies together and allow no swarming. With plenty of extracting supers, the tiering-up system is more profitable, as by giving two or three supers to each hive, extracting may be postponed until the height of the swarming impulse is past. Then an adequate gang of men taking off from 2000 to 3000 pounds daily can soon extract the honey. The needed machinery for the yard consists of bee-hats, smokers and brushes; a light cooper's hatchet for prying and scraping, a wheelbarrow with smooth, tight bottom, and a robber-cloth. The extracting-room should be tight enough to keep out bees; but if such a place is not at hand, the smoke from one or two smokers in the room will help considerably to keep them out. Last season I used a 6-frame reversible extractor, and now would buy nothing smaller. It is placed on three legs high enough to deliver the honey into a barrel, and has inside a device which strains the honey before it goes out into the spout. This management, for which I am indebted to Mr. R. F. Holtermann, I have found to be a great saving of time and labor. The can for cappings consists of a square galvanized-iron can large enough to hold all the cappings that two or three men could take off in a day. Fitted within this can is another with perforated-steel bottom to hold the cappings up 6 or 8 inches from the bottom and allow them to drain. Wooden cross-bars on top support the combs, being uncapped. The knives are kept particularly sharp, and in all our operations we study the quickest and easiest way of doing things.

All white honey should be removed by the first of August to avoid any admixture of dark honey. Owing to the great affinity which honey has for moisture it is better, if possible, to extract on drying days. The process of uncapping and extracting exposes so much surface of honey to the air that a saturated atmosphere would thin the honey considerably. In no case should honey be extracted during the honey-flow unless three-quarters capped. It should, as soon as possible, be put into the packages in which it is to be sold, and sealed up. For honey exposed to the air not only absorbs moisture and becomes thin and watery on top, but it loses a certain amount of the delicate flavor and aroma which it has from its native flowers.

This matter of the care of honey deserves attention. The producer should understand thoroughly the nature of honey, what treatment will benefit, and what will injure it. Then seek at all times to educate buyers in this line. I might mention a few points:

Honey is first nectar of flowers. Bees gather and ripen it by evaporation in the hive. The latter process is dependent upon the weather. In dry weather it is ripened quickly and capped. In damp weather little capping is done. In our climate honey extracted thin can seldom be thickened by any process which will not injure flavor and color. The point to be made is, that honey should be well ripened by the bees, then extracted dry, and sealed up as soon as possible.

The natural condition of honey is first liquid, then crystallized. As agitation hastens crystallization in a saturated solution, so it hastens the granulation of honey. Stirring, straining, dripping through cappings, the jar of machinery, changes of temperature which cause contraction and expansion, all hasten granulation. To repeat the comparison: One crystal dropped into a saturated solution of a salt causes the whole to crystallize quickly; so a few grains of honey left in the combs or cans from last year, or mixed in the honey, make it granulate sooner than it otherwise would.

As honey is a natural product—not manufactured—it should be sold in its natural condition. Many prefer it liquid because they do not understand that it should granulate. As we desire to educate the public to eat more honey, we should teach them that its natural condition is granulated. Of course, we must give the buyer what he wants, but use our influence to make him want granulated honey.

The package must be chosen to suit the trade. For liquid honey glass seems to be preferred. For granulated honey use tin, wood, or paper, but not glass. Cultivate the home market. See that every house is supplied.

Further points which I have missed will no doubt be brought out in the discussion.

The points which I would emphasize in the production of extracted honey, study your weather, climate, and locality. Choose the best breed of bees and the right style of hives, and keep both in extra condition the year around. Give extra attention to the queens and the wintering, and allow no natural swarms, and as few as possible artificial ones. Do not extract honey until well ripened, then seal it up as soon as possible. Study short cuts in working. Study your market. Sell to the best advantage possible, and make good use of your money when you get it.

MORLEY PETTIT.

In opening the discussion on Mr. Pettit's address, R. H. Smith endorsed the main points, emphasizing the effect of climate and atmosphere on honey. Methods of extracting which might do for California or Colorado would not do for Canada.

G. H. Sibbald—The plan of having two supers on every hive is all right, but if a colony were a little weak, to raise the super up and put another under would not work well. Mr. Pettit's point in urging the importance of queens is good.

Mr. Pettit—If the colony is too weak for two supers, or you have not enough supers to put two on each, you might extract only the best-filled combs from the super each time over the yard. The balance should be placed together at

one side of the super, to be finished while the empties are being filled.

James Armstrong recommended taking combs of thin honey from weak colonies and giving them to strong ones to be ripened.

SIZE OF HIVES.

There was a lengthy discussion on the size of hives.

R. F. Holtermann—The great point is to keep your bees together so they do not swarm. The larger hive rightly managed will do that.

Mr. Sibbald—To keep bees from swarming, one must keep the brood-chamber from clogging with honey. In a large hive one can not do this, for they will crowd it in around the brood, then swarm as much as ever. To get well-ripened honey one must make the bees crowd the honey up into the super.

Mr. Holtermann—I find by experience that a good queen will have as little honey in a 12-frame brood-chamber as in an 8-frame. If you can keep the bees from swarming, that is the point.

CARE OF HONEY.

Wm. McEvoy puts his honey into tanks and covers over tight for a few days, then skims off the foam. In what he skims off he finds fine specks.

Mr. Pettit—If the honey is well strained there is no need of any further skimming. The foam which rises on the top is just honey—same as the froth on a milk-pail is only milk.

Mr. Holtermann—Thin nectar may rise to the top. Then moisture is absorbed at the top of the can and makes the honey thin. This is the only difference between the surface honey and any other. Honey should be sealed up as soon as possible.

E. Dickenson, Jr.—This skum, if allowed to stand, goes back to honey.

Mr. Armstrong had found quantities of wax in the foam which rises on honey that has been strained. Liquefying honey brings more foam to the top, and in this is wax.

Mr. Dickenson uses a milk-strainer wire-cloth for straining.

Mr. Deadman criticised the use of a wheelbarrow. He would use a wagon and tier supers up six high. He can draw 500 pounds, or, on level ground, 1000 pounds, with one ahead to draw and one behind to push.

Several spoke in favor of the wagon on smooth ground, but where out-yards are in uneven ground the wheelbarrow requires only one track. Then Mr. Pettit pointed out that the specialist has so many things to move when he moves his bees that a wagon seems an extra burden. Every farmer has a wheelbarrow which can be borrowed.

(Continued next week.)



Our Sister Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Starting with Bees—Selling Honey—Bee-Stings.

Five years ago I purchased an only colony of bees from a neighbor for \$2.50. I knew nothing about bees. That was in early spring, and about the second week of June I thought it time to put on the "upper story", as we called it. By the last of July I examined it, and found to my joy and surprise it was full. I managed to get it off, and it was leaned against a tree, a little way from the hive, to let the bees crawl out. It was left there all that day and part of the next, until the bees seemed to be carrying the honey out, and it was taken into the cellar.

There were so many bees, and no super to put on, we thought we would try to divide them. We took out two frames of brood and put in some old empty frames and made two new colonies. That was so late that all the bees died in winter.

A friend let us take some old copies of the American Bee Journal, and we read those and found out if we wished to keep bees we must read. We sent for the Bee Journal, and got all the books we could and spent the winter in reading.

In the spring we bought 4 colonies of black bees. They were regular hornets. We increased to 9 by dividing or by taking a frame of brood from each colony that we could and giving them an Italian queen; by fall they were very strong.

We got a good supply of honey that season, averaging about \$4.00 worth a colony, besides what we kept for home use. We did not lose a colony that winter, and increased to 13 with a fair honey crop the next season.

The season of 1903 was a good one, as we had 1300 pounds of extracted and 800 pounds of comb honey from 29 colonies, spring count.

Last season we had 35 colonies, spring count, and about 325 pounds of extracted and 300 pounds of comb honey. I began to sell my first super of honey, and have had such a demand for both comb and extracted honey the past year that I could not supply half of my customers. I sell all from house to house. The extracted is put up in quarts, half-gallons and gallons. I have regular customers who wait for their winter supply. I never sell any honey that is not nice and does not look No. 1.

Some order honey from the house, or take it when they come for their berries. I get 8½ cents for all extracted and 12½ to 15 cents for comb honey, according to the quantity wanted.

I mold the beeswax in small cakes, and sell at 5 cents a cake, which brings me 45 cents a pound; or 40 cents a pound for large cakes of 4 to 6 pounds to the laundries.

We use now only the 10-frame dovetailed hive. There is very little trouble in hiving a swarm when one does issue, as the bees always settle on a low tree near the apiary. Last season it seemed as if every swarm would settle on the same tree. We try to keep down swarming by dividing, and keep them strong by sometimes moving the combs of hatching brood from one colony to another, giving the strong one empty combs.

The bees sting me very much, and it always swells and feels bad; while the helper they very seldom sting.

We winter some of our bees in a cellar and some in the house-cellar. Forty colonies went into winter, but I fear some were a little light.

I like the Sisters' department, so that is why I try to do a little. If you think this any good, I may tell what we do next season.

MRS. J. E. MILLIGAN.

Linn Co., Iowa, Jan. 16.

You have no doubt by this time realized that one can not be too careful about not leaving honey exposed in the apiary. It is almost sure to start robbing unless nectar is coming in very abundantly.

You did not say anything about taking any bees with the two frames of brood that you took to start those 2 colonies with, but I suppose you took the adhering bees with them. One frame of brood and bees is not enough to start a nucleus with at any time of year early or late, for many of the bees will return to the parent colony. Two frames of hatching brood well covered with bees is the very least that should be taken, and usually three would be better, especially if rather late in the season. Of course, I am not referring to baby nuclei, or several nuclei, in one hive for queen-rearing purposes, but nuclei for increase. It is much better to have them strong to begin with.

You certainly have been very successful in your venture, also in disposing of your beeswax to such good advantage in your home market.

One reason why you are stung more than your helper may be that you make quick, nervous movements, while your helper does not. Watch and see.

By all means let us hear from you as to the results of next season's work. We heartily bid you welcome to our corner.

Among the thousand and one remedies recommended for bee-stings, there is at least one which might be called a woman's remedy—the washerwoman's Javelle water—which is used to take out fruit-stains and the like. Whether effective or not, it is probably as good, at least, as the average bee-sting remedy.

Some Facts About Honey and Bees.—This is the subject of an article written by Mr. J. E. Johnson, and published on pages 581-82 of the American Bee Journal for Aug. 25, 1904. We have republished it in 4-page leaflet form for general distribution, and furnish it, postpaid, at 35 cents per 100 copies. Send all orders to the office of the American Bee Journal.



Mr. Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

BEE-KEEPERS A CLOSE CORPORATION.

So Editor Hutchinson can peacefully contemplate our craft reduced to such a close corporation that bee-papers would cease to exist. Bee-men too few to support papers. Now my feelings are inclined to "rage and pitch" a little at such a prospect as that. How is it with thee, gentle reader? Page 874.

DIVERSE CONCEPTIONS OF APICULTURE.

What a lot of diverse conceptions of apiculture comprise the A, B, C, D of the thing! And what a contradictory mix societies and conventions and journals oft make of the incongruous list! Quite enough to make Pegasus wake up and snort.

A's Apiculture—nice, rural side-show,
Lo a few hives, set up seven in a row,
Where'er you go.

B is Bee-Ology—science the best;
Pays us in wisdom, life, profit and zest—
Come and be blest!

C is cute Charity's bee-keeping plan,
For the pantry and purse of each laboring man—
Teach him, who can!

D is trust Dives—and sooner be hung
Than drop a cool dewdrop on Lazarus' tongue—
Go it—you're young!

A MISSOURI PROVERB AND HONEY-PRODUCTION.

A good Missouri proverb is that furnished by Mr. Calhoun, page 874: "No one so far from market as he who has nothing to sell". Same class of proverbs as Solomon's, "Where no oxen are the crib is clean". The world over, in all ages, it seems to be the case that nothing tends to beget nothing—and abundance of something good tends to find its way where it is needed. But a turnip is not going to ship a jug of warm, red blood—too far from market. Also, the Missouri proverb kind o' brings us around toward the encouraging fact that there is never so much honey produced in our country as ought to be eaten in it. No fundamental impossibility to trouble us.

BEE-KEEPING IN RUSSIA.

So Russia mostly uses hives of the kinds without frames; but the proportion of frame hives steadily and rapidly increases. It was 13 percent in 1894; now probably over 26 percent. In the 17th century, and previous apiculture (or api-culture), was very prosperous; and there were large amounts of both honey and wax to export. Now the nation pays out \$2,000,000 a year for bee-products. Like good, thrifty people they are scratching around to see if that sum can not be saved by improved apiculture; and thus it comes about that their representative, Mr. Abram Titoff, has been for some two years searching the United States for ways and ideas that may perchance make Russian apiculture more profitable. Mr. Titoff's paper read at St. Louis is a very noteworthy document. To help stimulate the declining industry the tax on bees was removed more than 100 years ago. Pages 878-880.

CANDY-MAKERS AND ADULTERATION STORIES.

Misery loves company. It soothes us some to learn that the national society of candy-makers has to struggle with prevalent lies about adulterations of candy. The case of flour is not quite similar. No amount of lying about flour would bluff people off from using it; but when candy and honey are believed to be spurious and unwholesome consumption declines. Page 881.

A QUEEN YARN TO KILL THE HONEY YARN.

A fib about a regular trade in queens at \$50 to \$200 each is not a yarn that we need to get infuriated at. Wonder if we can not turn it to good use. Lies oft devour each other; and we should be happy in seeing a harmless lie devour a pestilent one. Tell the good people that if honey were all manufactured by machinery, interest in queens would surely die out; and there would be no fancy prices. Queens can't do anything toward manufacturing honey except in the old-fashioned honest way. Page 3.

IMPORTANT OMISSIONS APT TO MISLEAD.

How often a comrade in print leaves us utterly in doubt whether what he is giving us is remarkable and important or very much a matter of course—all by omitting to tell us a few necessary things. About California's 8th question (page 8), as many as three different theories suggest themselves. Supposing that he increased 3 colonies to 54, he hardly gave them a chance to swarm that year. Increasing 54 to 65 would leave room for some swarming; and of 65 run for a season without any artificial increase we would of course expect some swarms. Swarming, however, is a very lawless matter—to present view. It is quite impossible to forecast it. A season with no swarms when we expected and wanted some is not unusual; and to have two such in succession is only mildly surprising. But a second supposition is that

all increase was by purchase, and that he manipulated them in the same way with intent to prevent swarming. The third supposition is the same, leaving out the manipulation—simply did nothing, and just tells us of three years without swarming as a natural wonder.



Doctor Miller's Question Box

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Spring Stimulative Feeding of Bees.

Will what is termed "Yellow C Bright" sugar do to make syrup for stimulative feeding in the spring? I see it is quoted considerably lower in price than the granulated sugar. If it is as good, and has no ill-effects on the bees, I am thinking of using it next spring.

MISSOURI.

ANSWER.—Any kind of sugar that bees will accept will be all right to feed in the spring after the bees can fly daily. It is generally considered that granulated sugar is as cheap in the long run as sugars of lower grade at less cost. But it is possible that there may be some mistake in this, provided there is very much difference in price.

As you say you are "just a beginner", it may be well to remind you that there is danger of doing harm rather than good by stimulative feeding, for those who have not had much experience. Indeed, many of those who have had long experience do not find it advisable to practice stimulative feeding at all.

Cleaning Brood-Frames—Fumigating Foul-Broody Hives—Prevention of Swarming.

1. In boiling frames to get the wax and propolis off, do you know of any acid that will help the matter along? I have had foul brood, and want to clean up and disinfect the frames.

2. I have been experimenting with formaldehyde, using a formaldehyde generator by boring a hole in the back of the hive, close to the ground, so the fumes could penetrate the brood-nest. In doing it that way I fill the hives and supers full of the fumes. What do you think of it?

3. Last summer, in manipulating my bees to prevent swarming, I took two frames of brood with sealed queen-cells on them, intending to leave the parent queen in the old hive. But by having my attention taken away from my work, I took the old queen along with the two frames. The old colony did not swarm, and I got 70 pounds of honey from it; in fact, it produced nearly twice as much honey as my other colonies where I kept the queen-cells destroyed and did not divide in any form. What do you think of that plan? Do you think it will work out that way every time?

ILLINOIS.

ANSWERS.—1. I don't know. It is possible that a liquid preparation of formaldehyde might answer, but I am ignorant on the subject. It is pretty generally agreed now that it is safe to use hives that have contained foul brood, and it is possible that it would be just as safe to use frames that had been boiled.

2. I have had no personal experience, and the testimony of those having had experience is conflicting. It is possible that the failures are owing to lack of thoroughness.

3. No, you can't always be sure of the same result, for in many cases—probably in most cases—taking away two frames of brood and bees with the queen would result in a swarm from the old hive as soon as the first young queen was old enough to go with the swarm. You may forestall that action, however, by cutting out all queen-cells as soon as the first queen has left her cell, or the next morning after the first evening when piping can be heard in the hive. But don't count too much on the plan; you're not likely to get any more honey than you would if the colony should be left entirely alone, provided the colony of its own sweet will should entirely refrain from all attempts at swarming—indeed, you'd probably get more honey in the latter case. The unfortunate feature in the case is that bees are not always willing to refrain from swarming.

Movements of the Cluster of Bees in Cellar-Wintering—Mating Queens in Confinement.

By observation, I am led to believe that a colony of bees wintered on the summer stand in an 8 or 10 frame hive, with honey in all of the combs, does not move to a new place when a warm spell gives them the chance, but spreads out the cluster and carries the honey to the old place, until it gets too cold again, then they draw back about where they were at first.

1. What are the facts in the case?

2. Do bees in the cellar change the location of their cluster during the winter?

3. If one were to discover a way to mate successfully queens in confinement, would it be of any great practical value to the craft?

4. What recompense could one rely on, to follow success? Experi-

ments along this line, I think, are rather expensive, and require much care and time.

5. Please give us a sample page out of Dr. Miller's record-book.

ILLINOIS.

ANSWERS.—1 and 2. Bees do both ways, both in the cellar and out. Sometimes honey is carried from an outer comb, without changing the place of the cluster. Usually the cluster moves gradually backward or upward, as the bees eat their way into the full combs.

3. In special cases it would; in general, probably not.

4. The greatest recompense would probably be the satisfaction of having conquered a difficulty generally considered unconquerable.

5. It wouldn't do to give a whole page; there would be a gibbering maniac in the Bee Journal office if one of that troublesome crew should attempt to get such stuff into type, but I think I'll risk giving one-third of a page, containing the full record of one colony:

24 72 96 120

50

Apr 29 q cl good May 11 g 1 br & b br in 4

03

19th 4 br 25th t 1 br & b br in 5 Jun 1

t 2 br & b 4 br 13th July 11 kleg

Translated into the United States language, that means that 50 is the number of the colony. The "03" under the 50 means that the queen was born in 1903. The figures at the top are the numbers of sections taken. First time, one super of 24 sections was taken, and the number 24 was put down. Next time two supers were taken at the same time, and 72 put down as the whole number up to that time. Then another super was taken, making 96, and the last time made 120 as the total for the season from that colony. If the last super had been only half full, the number would have been 108.

The remaining record runs: April 29 I found that the queen was clipped, and the colony was good for that time of year. May 11 I gave the colony 1 frame of brood & its adhering bees; and when that was done there was brood in 4 of the combs. May 19th there were 4 frames of brood, no frame being less than half full of brood. If one or more of the frames had been less than half full, the entry, instead of being "4 br" would have been "br in 4". May 25th I took 1 frame of brood & adhering bees, leaving brood in 5 combs. June 1 I took 2 frames of brood & bees, leaving 4 combs well filled with brood. June 13th I put on the first super. July 11 I killed 1 egg; that is, I destroyed one egg in a queen-cell. Evidently there was no further attempt at preparation for swarming the remainder of the season, no record being made if neither grub nor egg was found in a queen-cell.

The above is a true transcript; but not all colonies made so little attempt at swarming, while a few made no attempt whatever.

You will see that in the foregoing translation I have put in italics the letters that are in the actual record.

Transmission of Bee-Traits—Kraimer Bees—Old Brood-Comb and Size of Bees.

1. Are the good and bad traits of bees transmitted through the drones as much as through the queens?

2. Have the Kraimer bees from Krain, Austria, ever been imported to this country? Are they more hardy than Italians?

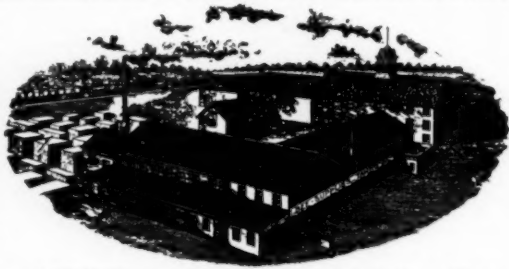
3. How many years constant use for brood can worker-comb be used without diminishing the size of bees? I have read that the cocoons left behind imperceptibly diminish the size of the cells of the future occupants, and prevent the bees from attaining their full development and size.

NEW YORK.

ANSWERS.—1. It is generally considered so; indeed, I think the preponderance of opinion is that the disposition of the offspring depends more upon the drone-father than upon the queen-mother.

2. You have probably read and heard quite a little about Carniolan bees. Well, Krain is merely the German word for Carniola. I'm not sure whether the claim for greater hardiness has been well established, but some think well of a cross with Italians.

3. I have combs that are 30 years old or more; and I can not see that the bees reared in them are any smaller than those reared in new combs. I remember that one of the patient foreign investigators—a German, I believe, whose name does not now occur to me—took the trouble to measure the contents of cells in combs very old and new, by actually filling them with liquid, and he found that the old cells contained just as much liquid as the new. The idea that the cells become smaller with age has been taught faithfully for many years, and there are still some who advise that combs be renewed every four or five years, but I think the idea is based only upon theory. Without any careful examination, one might easily conclude that as something more than was there before is left in a cell every time a young bee is reared in it, the cell must necessarily become smaller. But examine carefully, and you'll find that the diameter of the cell at its mouth remains the same. You will probably find that the bees gnaw out some of the cocoons at the sides, leaving it at the bottom. That, of course, will make the cell shallower, but to make up for it the bees add fresh wax to the cell-wall at the mouth of the cell. If they add to the cell-wall at the mouth, that ought to increase the thickness of the comb oughtn't it? Well, that's exactly what it does. Measure the thickness of a piece of worker-comb from which the first batch of brood has just emerged, and you will find it measures $\frac{3}{4}$ of an inch. Take one old enough, and it will be fully an inch thick, and you will find the septum $\frac{3}{4}$ of an inch thick. The only practical danger is that if the combs get to be old enough the spacing from center to center may become too small; in other words, the space between two combs becomes smaller. Don't worry about good, straight combs being hurt with age.



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AGENCIES.—Trester Supply Co., Lincoln, Neb.; Shugart & Oures, Council Bluffs, Iowa; Fulton & Ford, Garden City, Kan.; I. H. Myers, Lamar, Colo.; Southwestern Bee Co., 438 W. Houston St., San Antonio, Tex. **KRETCHMER MFG. CO., Red Oak, Iowa.**

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QUALITY.

Some of our competitors have been trying to cast a suspicion upon our goods, by stating that the quality of the bee-supplies furnished by us, at a less price than is usually charged for same, is of lower quality.

WE DENY THIS, and defy any one to prove that such is the case. All goods manufactured by us are guaranteed to be of standard quality, irrespective of the prices.

The cause for selling our products at lower prices than others, is very simple. We are at the heart of the lumber district, consequently do not have to pay freight for several hundred miles on raw material and also prepay return freight on the manufactured product.

We have one of the most modern plants in the country, running by water-power. This saves us the expense of fuel. Altogether we are able to sell at **25 percent less** than the average manufacturer is able to do, without sacrificing the quality of our goods.

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Will tell you why if you will send for FREE CATALOG AND SAMPLES.
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WHOLESALE AND RETAIL.

Working Wax into Foundation for Cash a Specialty.

E. Grainger & Co., Toronto, Ont., Sole Agents in Canada for Dittmer's Foundation.

GUS DITTMER, Augusta, Wis.

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Reports and Experiences

Results of the Season of 1904.

I started in the spring of 1904 with 67 colonies and got 4500 pounds of extracted and 3700 pounds of comb honey, and increased to 140 colonies. I took 300 pounds of extracted honey from one colony. I am only a novice in bee-keeping, but I am learning. I have the "A B C of Bee Culture" and Prof. Cook's and Dr. Miller's books, and the best of all the "Old Reliable".

PAUL JONES.

Polk Co., Minn., Jan. 11.

Bee-Keeping in Arkansas.

I have some fine Italian bees that came from Illinois. I had them shipped to me in the fall, and they stored about 3 frames of nice honey in October.

I have secured 100 pounds of surplus honey from every strong colony during the past 3 years.

My apiary is well located 64 miles from Little Rock on the Rock Island road. I have been keeping bees here for the past 4 years, and have been a subscriber to the American Bee Journal the most of that time, and have read some good books and papers on bee-culture. I can sell all the honey I can produce right here and in neighboring towns at 12½ cents per pound.

I believe bee-keeping in Arkansas can be made a success. It is a fine State, and has lots of rich soil yet undeveloped.

Yell Co., Ark., Jan. 2.

A. E. STONE.

The 4x5 Section vs. the 4¼x4¼.

The 4x5 section is receiving a great deal of attention lately, and much is being said about it, but it seems to me a rather one-sided discussion. Let us look into the subject a little: Its strong points or desirable features are too well known, (being set forth in nearly every catalog or paper that one may pick up), to be mentioned here. We will dwell only upon its most noticeable flaws.

Did you ever think, when putting full sheets of foundation into sections, that the 4x5 takes more than the square ones? Well, it does; and at the present prices, or 70 cents per pound, it costs about 66 cents per thousand more for these than for the old-fashioned square ones. I am supposing, too, that the foundation is cut to fit them. If regular

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or not you will be in possession of information which will enable you to buy the right telephone, build the right line and save unnecessary experimenting. We send it free.

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goods are used the cost will be a great deal more, on account of waste.

It is a mathematical fact that a sphere contains the greatest solid contents in relation to its surface, of any solid; i.e., that a sphere having 100 square inches of surface will have a greater number of cubic inches contained in it than any other solid having the same area. But we can not have a spherical section, for various reasons. The nearest approach to it that we could use would be one in the form of a cube. This is hardly desirable because it would be almost too small to put foundation into, and would look small when filled. However, we can use the $4\frac{1}{4} \times 4\frac{1}{4}$ plain section, which is the nearest approach to it.

Let some scientist figure out for us how much more comb or wax it takes to fill a 4×5 than a square section, then let him multiply this by 10 to 25, which I think is the number of pounds of honey commonly claimed to produce a pound of wax. Again, let him multiply by 15 cents, the price per pound of the honey, and this product by 1000. We will then know how much we lose on every 1000.

Then, too, there is the first cost. Section-holders for these boxes cost \$2.25 per 100, while those for others can be obtained for \$1.90. Other goods are in proportion. One



OLD'S SEED SPECIALTIES

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10 Great Seed Specialties

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Reliance Y. Dent Corn. Best for So. Wis. and No. Ill. Wisconsin-grown Seed Corn shipped on the car.

Mandschouri Barley. Best of all barleys. Pure, clean seed.

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Alfalfa. Best Am. grown seed. Large stock.

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WHITE SWEET CLOVER New SEED for sale at 4 cents per pound in 50-pound lots.

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For Queens SEND TO **JOHN W. PHARR** Berclair, Tex.

He will furnish at same prices as last year: Tested, \$1; Untested, 75c; 5 for \$3.25; 10 for \$6; 15 for \$8.25; 25 for \$12.50; 100 for \$45. He breeds Goldens, Carniolans and 3-Band Italians. Also 1, 2, and 3 frame Nuclei, and full colonies. Prices given on application. Pharr pays the freight, and guarantees satisfaction on all Queens. To do justice and judgment is more acceptable with the Lord than sacrifice. — (Prov. 8: 21.) 6A4f

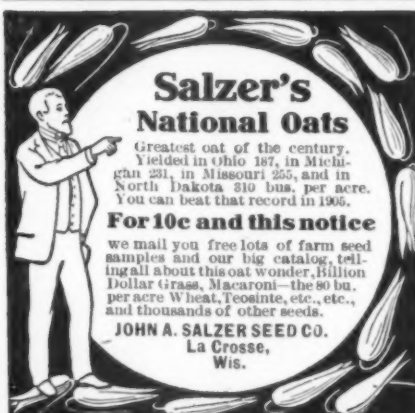
Wanted Man 20 to 30 years old capable of taking charge of an apiary of 200 colonies. Can give employment balance of year collecting and soliciting for lumber and coal. In answering give reference and salary expected. **TRESTER SUPPLY CO. LINCOLN NEB**
Att; Please mention the Bee Journal.



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grown in blizzard belt of Northern Iowa are healthy and full of vigor. We grow them by the million, and our prices are the lowest. To introduce them we will send 12 choice 2-year-old trees free of charge to each property owner reading this advertisement. Postage 5c—send it or not, as you choose. Postal brings them with price list and sheet of bargains.

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For 10c and this notice

we mail you free lots of farm seed samples and our big catalog, telling all about this oat wonder, Billion Dollar Grass, Macaroni—the 80 bush, per acre Wheat, Teosinte, etc., etc., and thousands of other seeds.

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FOR SALE

Several Hundred Cases
Nevada
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PRICE—7½ cents per pound, or \$9.00 per case of two 60-pound cans, f.o.b. Chicago. Two cases or more at 7 cents per pound. Write for special price on larger quantities. Guaranteed absolutely Pure. Sample, 10c.

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are made of metal and asbestos throughout; will not warp, shrink or crack. The Cycle Hatcher has no egg tray doors to open—eggs are cooled without removing from the machine. Will hatch hen, duck, goose or turkey eggs equally well and at the same time. Regulation is entirely automatic and scientifically exact—we obtain results impossible to get in wooden machines. Write for free catalogue and learn all about these Metal Mothers machines. "the Wonder of the 20th Century." A 50-egg hatching machine complete for only \$5.00.

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To absolutely please bee keepers in filling their wants has been our constant aim for eight years, and while we do not boast about ourselves we are sure that we are excelled by nobody. If you are not already a customer don't fail to write to us and tell us your wants.

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87½ Percent Saved

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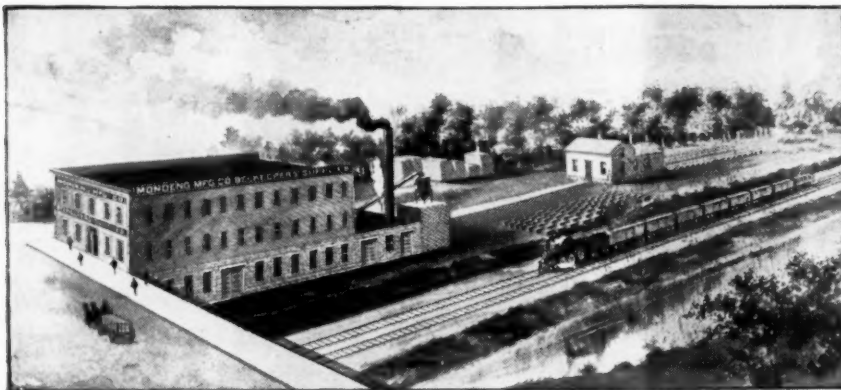
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YOU may hold a policy and BOND.

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We will allow you a cash discount of 3 percent on orders sent in during January.

PAGE & LYON MFG. CO., New London, Wis. U.S.A.

hundred section-holders will hold 400 sections, so that it takes nearly 300 of them to hold 1000 sections—a difference here of \$1.45 in 1200 sections. But you will say, "I won't have to buy supers and section-holders every year." Quite so, but your money is tied up in them, and you are losing the interest, and I tell you that if bee-keepers make a living they have to look out for such things.

There are possibly other things against the 4x5 sections, and many things in their favor. Please do not understand me as condemning them. I have just mentioned a few points that seem to have been overlooked. I use a few of them myself, and find them entirely satisfactory, except in the several ways mentioned above.


ROBERT H. SMITH.

St. Lawrence Co., N. Y.

Home Market's Demand and Supply.

The invitation on page 19, for those who can sell more honey in the home market than they produce, to tell the rest how they accomplish it, induces me to relate my experience, although it really seems to my mind a trifle tame.

I am a practicing physician, and some 10 or 12 years ago I purchased a colony of bees, thinking they would furnish me some needed



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The big brother of the original or Illinois type of Reid's Yellow Dent. Bred to fit the Iowa idea of longer ears, rougher grains, plenty of vigor, and a big yield. Same perfect form, handsome color, deep grains and straight rows, but a bigger, better type every way. I sell it either ear or shelled. Catalog, photographs, and samples free and I throw in a package of watermelon seed and one of flower seeds besides. Send for them today.

HENRY FIELD
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"The ear seed corn man."

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All leading races. Bees and Nuclei in any quantity for distant shipments a specialty. Send for circular and prices.

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Bought and sold. Honey-Cans in season. Be sure and get our prices.

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that poultry pays a larger profit for the money invested than any other business; that anybody may make a success of it without long training or previous experience; that the Reliable Incubators and Brooders will give the best results in all cases. Our 20th Century Poultry Book tells just why, and a hundred other things you should know. We mail the book for 10 cents. Write to-day. We have 115 yards of thoroughbred poultry.

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MEANS
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DADANT'S FOUNDATION

MEANS

Solid, Straight, Well-Built Combs.



110,000 Pounds

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in 1904.

Satisfaction Guaranteed.

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OF ALL KINDS.



BEESWAX WANTED at all times.
Send for our 1905 Catalog.

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HATCHING CHICKENS WITH THE
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that high-grade, low priced, absolutely reliable, up-to-date hatcher. Sure profits. Begin now—get an early start. Write for free catalog today.
Gem Incubator Co., Box 52, Dayton, Ohio



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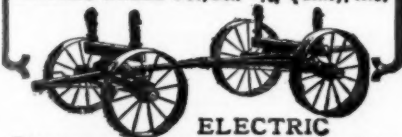
about good wheels and good wagons that will save you a lot of work and make you a lot of money—the

ELECTRIC STEEL WHEELS
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ELECTRIC HANDY WAGON.

By every test, they are the best. More than one and a quarter millions sold. Spokes united to the hub. Can't work loose. A set of our wheels will make your old wagon new. Catalogue free.

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INCUBATORS AND BROODERS

acknowledged by experts to be the most profitable machines made. Winners of 585 First Prizes. Write for free catalog with proof and valuable information for beginners.
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recreation and supply our own table with honey. When I was 17 years old I lived several months with an uncle and aunt who made a specialty of bees, and during that time I picked up some rudimentary knowledge of the business.

Well, I gave that first colony such good attention that they not only supplied our table and my wife's mother's table, but we had a good many pound sections to give to friends or relatives. At first I refused to take money as I was not in the business for gain. I did not myself belong to any church, but always tried to help all denominations when I could, so it happened that every minister in town, or that came to town to hold service, was sure of at least one pound of my honey every year.

In a few years the number of colonies increased to 3 or 4, and I told my wife and boy they might sell what they could spare after our near relatives and all the preachers had been well treated. Since that time there has never been a season we could not have sold at from 15 to 20 cents per section, several times as much honey as we had to spare.

Last summer I increased to 12 colonies and Italianized all of them, purchasing queens from 3 different dealers, thus seeking to get a mixed strain. Several people have already spoken to me for honey, although January has not yet passed.

As to the final outcome I am not very sanguine. We have in this locality so many years that bees do almost nothing. There has been in the last decade such a slaughter of basswood trees, and the white clover is so very uncertain, that whoever keeps bees in



NEW POULTRY CATALOGUE

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10,000 Plants for 16c

More gardens and farms are planted to Salzer's Seeds than any other in America. There is reason for this.

We own and operate over 5000 acres for the production of our warranted seeds. That you may try them, we make you the following remarkable offer:

For 16 Cents Postpaid

1000 Fine Solid Cabbage,
1000 Rare Luscious Radishes,
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1000 Splendid Onions,
2000 Jolly Tender Turnips,
2000 Natty Tender Celery,
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Above seven packages contain sufficient seed to grow 10,000 plants, furnishing bushels of brilliant flowers and lots and lots of choice vegetables, together with our great catalog telling all about Flowers, Roses, Small Fruits, etc., all for 16c in stamps and this notice.

Big 140-page catalog alone, 4c.

JOHN A. SALZER SEED CO.,
La Crosse, Wis.



THIS LIGHTNING Lice Killing Machine



kills all lice and mites. No injury to birds or fowls. Handles any fowl, smallest chick to largest gobbler. Made in three sizes. Pays for itself first season. Also Lightning Lice Killing Powder, Poultry Lice, Lice Murder, etc. We secure special low express rates. Catalog sent free. Write for it.

CHARLES SCHILD CO.,
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Our catalogues list large lines of music and "EVERYTHING MUSICAL"—Band Instruments, Violins, Guitars—everything from a Jew's-harp to a Bass Drum, for the band or the beginner—we import and Wholesale them, and make prices that retailers can't reach. Send for catalogues. Write today and the quicker you can "play" H. E. McMillin, 108 Superior St., Cleveland, O.

4% Discount to Feb. 1st
on the **Best Dovetailed Hive made.**
Cheaper than the cheapest. Circular
ready to mail. Don't miss it. 200 sec-
ond-hand hives for sale cheap.

The Wood Bee-Hive and Box Co.
484tf **LANSING, MICH.**

TREES THAT GROW

Hardy varieties; yield
big crops. Grafted
Apple, 45c; Budded
Peach, 35c; Black
Locust Seed-
ings, \$1 per

GERMAN NURSERIES
Carl Sonderhaus, Prop.
1000; Con-
cord Grapes,
\$2 per 100. We
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3 12.80 For
200 Egg
INCUBATOR

Perfect in construction and
action. Hatches every fertile
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STANDARD

Poultry AND... Bee SUPPLIES

The best of everything for the
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TOLEDO are the Lowest**

**BIG DISCOUNTS FOR
EARLY ORDERS.**

60-page Illustrated Catalog will be out
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GRIGGS BROS.

521 Monroe Street,
TOLEDO, OHIO.

4A23t Please mention the Bee Journal.

CONVENTION NOTICES.

Utah.—The Utah Bee-Keepers' Association
will hold its spring convention in the Mayor's
Office, City and County Building, April 7, at 10
a.m. All are invited. Matters of great interest
to bee-keepers, and horticulturists will be con-
sidered. Cache Valley's experience of killing
the bees by poison spraying in the bloom must
not be repeated. Jot down your thoughts on
this or any other question, and bring or mail
the same. **G. E. GARRETT, Sec.**
E. S. LOVESY, Pres.

Michigan.—The Michigan State Bee-Keepers'
Association will hold its annual convention
Feb. 23d and 24th, at the Eagle Hotel in Grand
Rapids. The Eagle Hotel is located at 65 to 71
Market St., cor. of Lewis St., one block south
of Monroe St. It will give a rate of \$1.50 per
day, and furnish a room free for holding the
convention. The Michigan State Dairymen's
Convention will meet in Grand Rapids at the
same time, and advantage may be taken of this
fact to secure reduced rates on the railroads.
When buying your ticket, ask for a certificate
on account of the Dairymen's Convention. The
secretary of the Dairymen's Association will
sign this certificate which will then enable the
holder to buy a return ticket for one-third fare.
W. Z. HUTCHINSON, Pres.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.,

166 SOUTH WATER ST. CHICAGO, ILL.

the future will have to calculate on feeding to
such an extent as to make the profits some-
what uncertain.

In this village, too, there are a good many
people trying to keep bees in unscientific
ways. It surely must be that there are too
many bees for the amount and kind of
pasturage. This evil will probably remedy
itself ere long.

As I think over what I have written I
strongly suspicion that if I had been really
trying to create a market for honey, the re-
sults might have been different.

Several times I have had occasion to inform
people that artificial comb honey is never
made, and that I am authorized to offer \$1000
for a pound of such. **DAVIS R. EMMONS.**
Champaign Co., Ohio, Jan. 27.

Feeding Bees In An Observatory Hive.

On page 40 is a query concerning feeding
bees in an observatory hive. Dr. Miller will
pardon me for saying that he has not given
good advice in his answer. If it were late in
fall it would, indeed, be best to give the full
comb of honey; but the question reads other-
wise. To take away the frame from an ob-
servatory hive means more than a mere fur-
nishing of food, for this hive has all-in-one-
comb its entire assets in honey, pollen, and
brood. It would not be advisable to give a
comb of honey then any more than to give a
full colony a set of combs of honey for its
own combs.

Nor would it be wise to feed "Good" candy.
The bees could not make good use of it for
keeping up breeding, and at the best would
be a discontented lot of bees.

"New Jersey" took the right place to feed
his bees, but did wrong to place the food in
an open saucer. Had he filled a tumbler with
the feed, inverted the tumbler in a saucer,
and placed a pin under the edge of the tum-
bler, he would probably have had no difficulty
with robber bees. Obviously, bees can not
protect an open dish of honey, but bees can
protect a thin crack of honey. Then, too, the
open dish is inviting robbers by throwing out
a sweet odor, but the tumbler furnishes prac-
tically no odor.

If the observatory hive is tight at the bot-
tom it is well to pour half a cup of syrup
right into the hive when the bees are urgently
in need of feed; if robbers get in, expose the
hive to light and the confused robbers will
not be able to find the entrance before they
find death.

Yes, "New Jersey," you can winter bees in
observatory hives, if you follow the right
method. I wintered one winter before last,
two last winter, and am wintering two this
winter. They winter just as well as one
could ask. I expect my earliest swarms from
those hives next spring. **ALLEN LATHAM.**
New London Co., Conn.

FOR YOUR BEE-SUPPLIES, BERRY-BOXES & CRATES

—SEND TO THE—

Sheboygan Fruit-Box Co., Sheboygan, Wis.

LIBERAL DISCOUNTS on all orders till Jan. 1, 1905.

1A13t

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200 Rabbeted L. Hives, 8-frame, 1½-story,
new, in flat, in 10 lots, 95c each; 100 10-frame,
\$1.10 each. 89,000 No. 1 Polished Sections,
\$3.75 per M. 1000 pounds White Extracted
Honey in 60-lb. cans, 7¼c.

W. D. SOPER, Rt. 3, Jackson, Mich.

7Dt Please mention the Bee Journal.

Bee-Keepers' Supplies.

Send for Catalog.

Leahy Mfg. Co., East St. Louis, Ills.

2A16t Please mention the Bee Journal.

BEES FOR SALE

I wish to sell 40 colonies of Bees. They
are the Italian Strain, in a good, strong con-
dition, and are wintering good. Reasons for
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sell all, or 5 or 10 colonies. Inquire of

F. M. SCHEDER,

7A4t

PRESTON, IOWA.

Wanted

Position by young man
to care for Bees. Best
of references given.
North preferred.

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450,000 TREES

200 varieties. Also Grapes, Small Fruits etc. Best root-
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Made of artificial stone. Practically inde-
structible, and giving entirely satisfactory re-
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from the dealers. Price of Press, \$1.50—cash
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ADRIAN GETAZ,

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send us 25 cents for a 3 months' trial and
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New catalog now ready. Address,

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1A1tf

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That's how they live and thrive.
You can't have healthy, profitable
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Lambert's Death to Lice

promptly kills all insect vermin and
makes sitting hens comfortable.
Sample 10c; 100 oz., \$1.00 by express.

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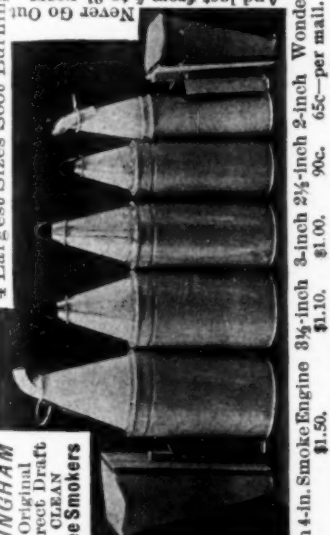
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Tin 4-in. Smoke Engine 3 1/2-inch 2 1/2-inch 2-inch Wonder
\$1.50 \$1.10 90c 65c—per mail.

Sent on receipt of price per mail.

T. F. BINGHAM, Farwell, Mich.

OTISVILLE, PA., Jan. 18, 1904.
Dear Sir:—I have tried almost everything in the smoker line; 3 in the last 3 years. In short if I want any more smokers your new style is good enough for me. I thank the editor of Review for what he said of it. Those remarks induced me to get mine.
FRED FODNER.

Headquarters for Bee-Supplies

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ESPECIALLY FOR THE SOUTH,
AS ALL FREIGHT
NOW GOES THROUGH CINCINNATI.

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C. H. W. WEBER CINCINNATI ... OHIO ...

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

Honey and Beeswax

CHICAGO, Feb. 8.—The trade in honey is still below the normal in volume with prices unchanged, except that the pressure on the part of the holders to realize is more urgent. Fancy white comb honey, 12 1/2@13c; No. 1, 12c; off grades, 10@11c. Extracted, white, 6@7c, according to flavor, quality and package; anything off is lower; amber grades, 5 1/2@6 1/2c. Beeswax, 30c per pound, if clean and good color.

R. A. BURNETT & CO.

BOSTON, Feb. 8.—Sales of honey still continue light, principally on account of the extreme cold weather which we are having. On account of the large stocks in hand, prices that we have quoted are shaded in round lots. Fancy white, 15@16c; A 1, 15c; No. 1, 14c. Extracted, from 6@7c, as to quality.

BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 9.—The demand for comb honey still continues light, as most of the retail dealers were stocked up on \$2.25 honey before the holidays, two cars of which were sold here at that time. We look for a better market in the near future, and quote: Fancy comb, 24-section cases, \$2.50; No. 1, \$2.25. Extracted, white, per pound, 6@6 1/2c; amber, 5 1/2@6c. Beeswax, No. 1, 28@30c.

C. C. CLEMONS & CO.

CINCINNATI, O., Feb. 7.—Comb honey is now coming in more freely, and prices if anything have moderated a little. The sales made and prices obtained were for No. 1 fancy water-white comb, 12@13 1/2c; single cases, 14c. Extracted is sold as follows: White clover, in barrels, 6 1/2c; in cans, 7 1/4@8c; amber, in barrels, 5 1/2@5 3/4c; in cans, 6@6 1/2c. Beeswax, 27c.

C. H. W. WEBER

PHILADELPHIA, Feb. 8.—The market of all grades of comb honey continues rather weak and trading light, with a good supply on hand. We quote: Fancy white, 15@16c; No. 1, 13@14c; amber, 11@12c. Extracted, white, 7@8c; amber, 6@7c. Beeswax, 28c.

We are producers of honey and do not handle on commission.

WM. A. SELSER.

CINCINNATI, Dec. 30.—Since our last report was published, the price of extracted honey has advanced, no doubt acting in sympathy with the sugar market. We quote amber extracted in barrels at 6@6 1/2c; white clover, in barrels and cans, 6 1/2@8 1/2c. Fancy comb honey, 13@14c. Beeswax, 28c.

THE FRED W. MUTH CO.

ALBANY, N.Y., Feb. 8.—Honey market dull this extreme cold weather, especially comb, which candies or granulates and cracks easily. We quote: Fancy white, 13@14c; No. 1, 12@13c; mixed, 10@11c; buckwheat, 10@11c. Extracted, better demand: Buckwheat, 6@6 1/2c; white, 6@6 1/2c. Buckwheat most in demand, as the Jewish people will have no other. Beeswax, 30@32c.

H. R. WRIGHT.

SAN FRANCISCO, Jan. 25.—White comb, 1-lb. sections, 11 1/2@12 1/2c; amber, 9@11c. Extracted white, 6@6 1/2c; light amber, 4 1/2@5 1/2c; amber, 3 1/2@4 1/2c; dark amber, 3@3 1/2c. Beeswax, good to choice, light, 29@30c; dark, 27@28c.

Market is quiet and for other than choice water-white is lacking in firmness. High-grade honey is in light supply, but there is no scarcity of amber stock. Three lots of Hawaiian Island honey, aggregating 523 cases, arrived the current week.

NEW YORK, Feb. 8.—The market is decidedly dull on comb honey and very little moving, with plentiful supply. We quote: Fancy white comb, 14c; No. 1, 13c; amber, 11c; dark, 9@10c. Extracted honey is in fair demand, and prices remain about the same. Beeswax steady and in good demand at 29c.

HILDRETH & SEGELKEN.



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And Prompt Shipments

Is what we are making for our customers.

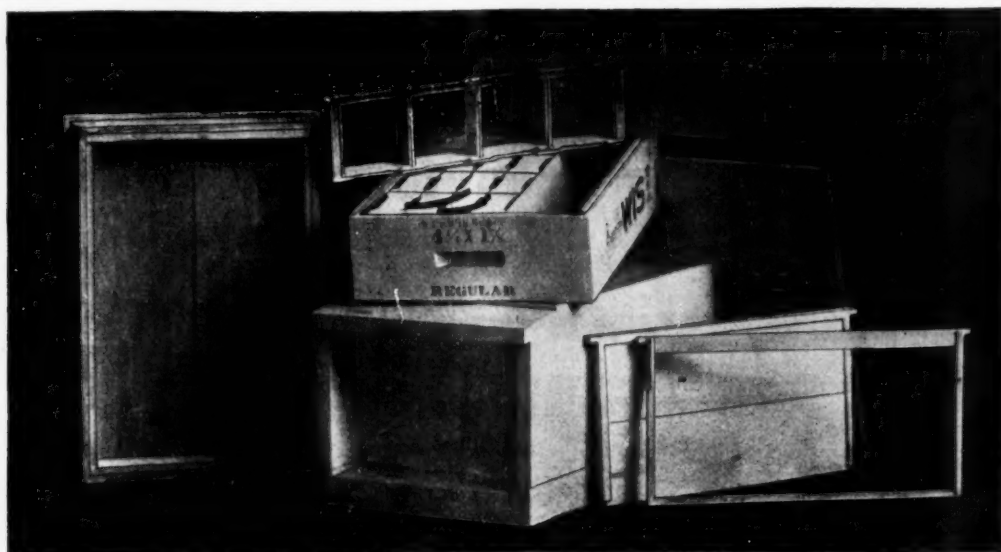
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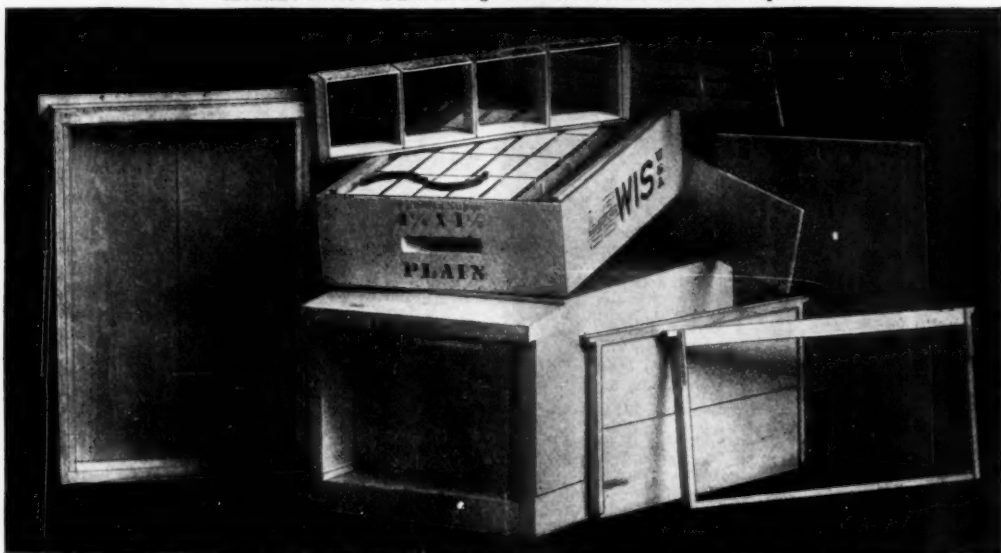
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Wisconsin Hive, One and One-Half Story, Regular Super.

Arranged for $4\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{2}$ bee-way sections.

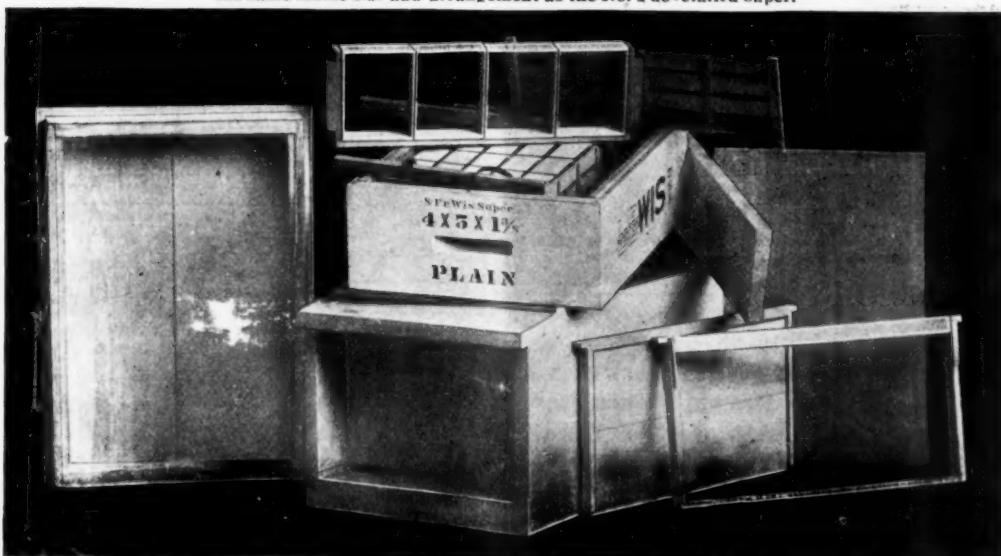
The above is our regular one and one-half story Wisconsin style, including one super or section-case of exactly the same inside size and arrangement as the No. 1 dovetailed super.



Wisconsin Hive, One and One-Half Story, $4\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{2}$ Plain Super.

Arranged for $4\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{2}$ plain sections.

The above is our regular one and one-half story Wisconsin style, including one super or section-case of exactly the same inside size and arrangement as the No. 2 dovetailed super.



Wisconsin Hive, One and One-Half Story, $4 \times 5 \times 1\frac{1}{2}$ Plain Super.

Arranged for $4 \times 5 \times 1\frac{1}{2}$ plain sections.

The above is our regular one and one-half story Wisconsin style, including one super or section-case of exactly the same inside size and arrangement as the No. 4 dovetailed super.

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